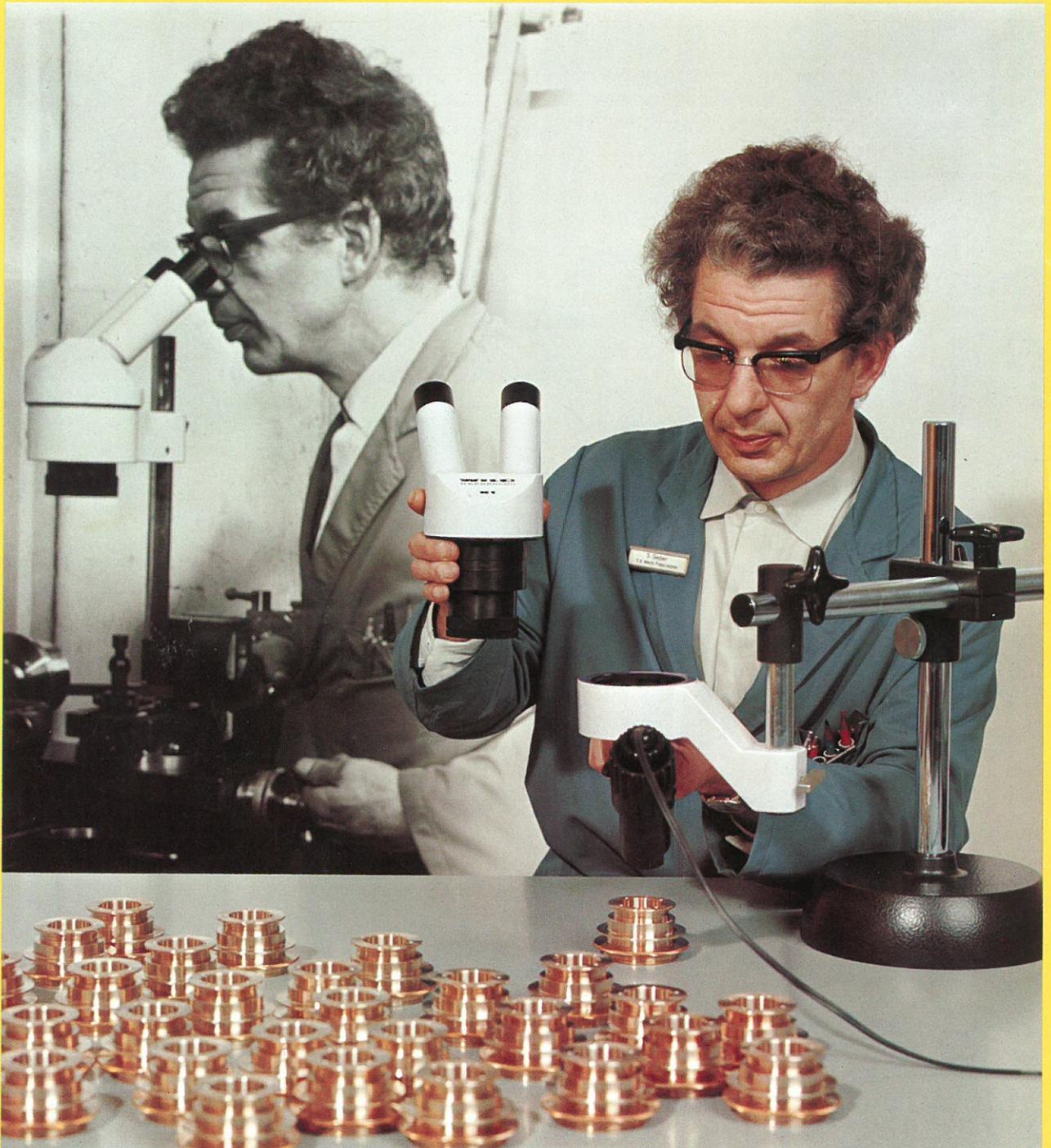


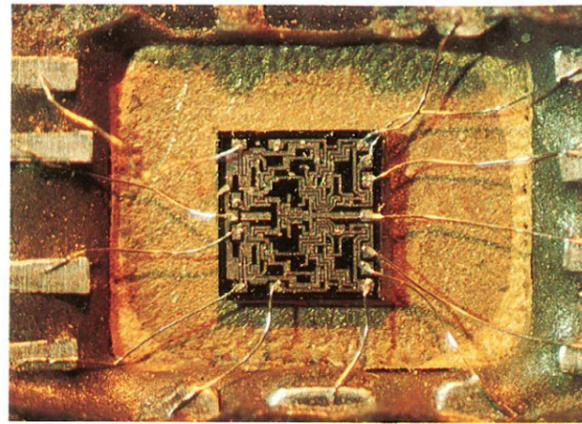
# *Wild M1 Stereomicroscope*

**WILD**  
HERBRUGG



## Wild M 1 Stereomicroscope

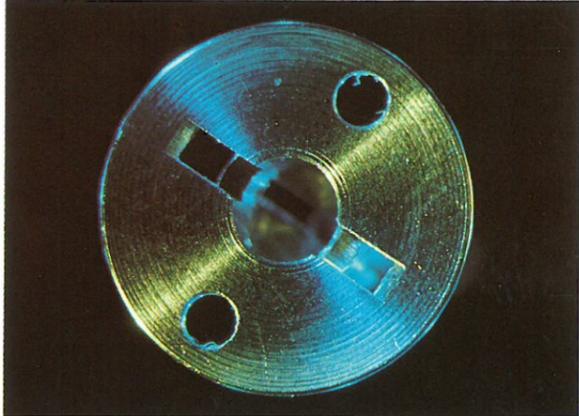
The Wild M 1 Stereomicroscope is designed for use in circumstances where the magnification does not have to be changed very often. The magnification and working distance of the optical outfit can be matched to requirements. Particular importance is given to the fact that the instrument can easily be attached to machines and to pieces of apparatus.



*Integrated circuit, magnification 21 x*



*Escapement wheel of watch, magnification 10 x*



*Component of altimeter, magnification 6 x*

### Special Features

- \* Low-priced instrument with magnification matched to application
- \* Easily adapted to fit on machines and on pieces of apparatus
- \* Interchangeable objectives
- \* Crisp image, erect and laterally correct
- \* Complete range of stands for incident and transmitted light

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*Page 3: Wild M 1 Stereomicroscope, with incident-light stand and low-voltage lamp*



## Design

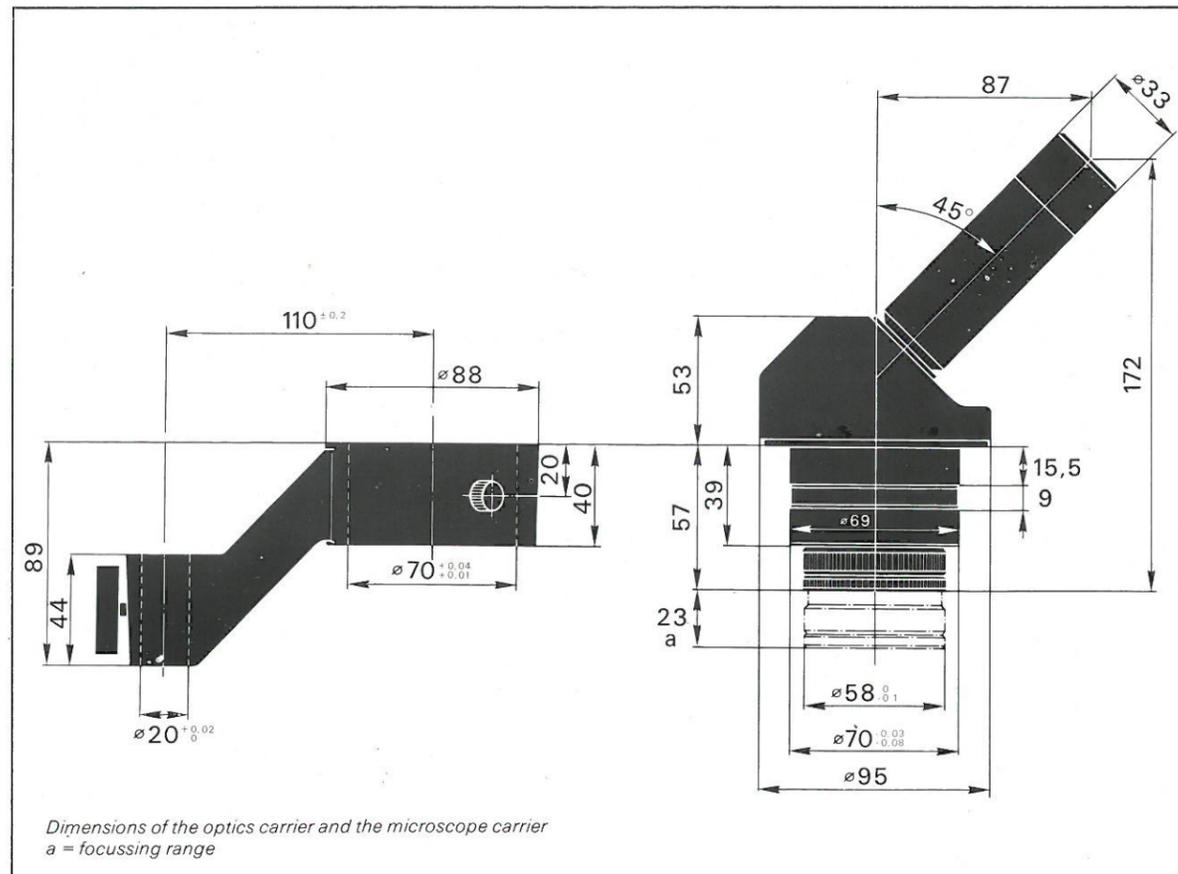
A stereomicroscope is normally designed with its optics carrier built on to a drive housing. This system has however been dispensed with in the M1, in order that the stereomicroscope may be easily mounted on machines and appliances.

The M1 Stereomicroscope consists of an optics carrier having a fixed binocular tube inclined at 45°. The interpupillary distance can be varied within the range 47–76 mm.

The instrument can be equipped either with both eyetubes fixed or with the left one adjustable.



Right: M1 Stereomicroscope, left eyetube adjustable



The optics carrier is cylindrical and can be mounted in any bracket having a hole of the appropriate size. The combination of optics carrier, holder, objective and eyepieces is immediately ready for use.

To focus the instrument, the objective is moved along the optic axis, rather as in the rangefinder of a camera. The quality and scale of the image remain unaltered, because the beam is parallel between the objective and the tube.

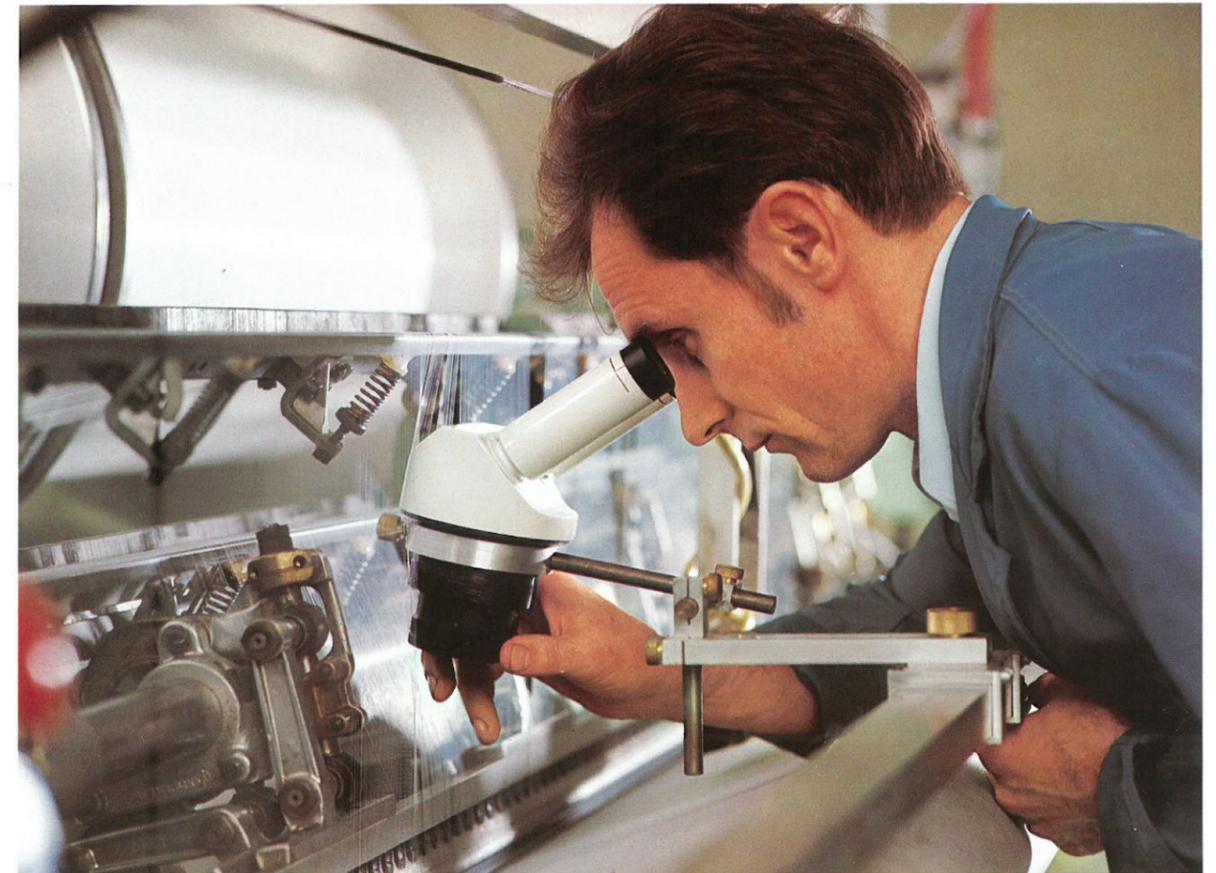
The microscope carrier enables the instrument to be used on the swinging-arm stand or the table-clamp stand, or on the various incident and transmitted-light stands which are available. The optics carrier can be completely rotated in the microscope carrier, and fixed at any position. The microscope carrier can be inverted on the column if the size of the specimen warrants it.

The magnification is altered by changing the eyepieces or the main objective. The magnification and the working distance can thus be matched to the particular requirements of the job in hand. The 1.0 x objective supplied with the standard outfit has a working distance of 150 mm and in combination with the various eyepieces produces total magnifications of 5 x, 10 x, 15 x and 20 x, which are those most frequently in demand.

Objectives of 2.0 x, 0.5 x and 0.25 x are also available. The last of the three is used in circumstances requiring low magnification and large working distance.

Information about optics combinations, total magnifications and working distances is given in the table on page 11.

M1 Stereomicroscope in use in the textile industry  
 (Hasler Textiles Ltd., Berneck, Switzerland)



## Interchangeable Accessories

### Stands

Incident and transmitted-light stands are available in two versions:

- a) Stands with 220 mm column. These are the ones normally used, and are suitable for outfits which include the 1.0 x and 2.0 x main objectives.
- b) Stands with 300 mm column. These are mainly used either if the instrument is equipped with an extra stage, or if large specimens are to be examined. They are suitable for use with the 1.0 x and 2.0 x main objectives.

### Incident-light stand

The incident-light stand consists of a firm baseplate which bears a column to carry the stereomicroscope. A safety ring and a sleeve on the column are a precaution against damage to the microscope by rough treatment. The instrument can be swung out 30° sideways on the column. An opening in the baseplate is designed to take a black/white metal stage plate or one of the various stages. Two stage clips are included in the outfit.

M 1 Stereomicroscope on swinging-arm stand



### Transmitted-light stand

The transmitted-light stand corresponds in design to the incident-light stand, but the baseplate is higher and has an adjustable mirror and a port for the reception of a lamp for transmitted light. The transmitted-light stands are supplied with a frosted glass stage plate and with two stage clips.

A dish-shaped handrest of plastic (325 683) can be used. It surrounds the entire transmitted-light stand and presents a broad, stable surface.

### 264 922 Swinging-arm stand

The swinging-arm stand is suitable for use with large specimens. It comprises a stable cast base of 20 cm diameter with a 35 cm vertical column to which a 35 cm horizontal arm is attached by means of a clamping block. The horizontal arm may be swung through 360° and its height and overhang can be varied as required. The stereomicroscope is held to the horizontal arm by a microscope carrier rod, which can be slid along the arm and tilted at any angle. There is a safety screw.

### 264 923 Table clamp stand

The table clamp stand is designed in the same way as the swinging-arm stand, but instead of a cast base it has a clamp which can be attached to the edges of tables having a thickness of between 20 and 50 mm. The two stands are of similar versatility.

### Stages

Stereomicroscopes are much more comfortable to work with if the correct stage is used. The following stages are available for various purposes:

#### 153 419 Metal stage plate

All incident-light stands are supplied complete with a metal stage plate and with two stage clips. The plate is black on one side and white on the other, and fits into a hole in the base of the stand.

#### Glass stage plates

108 122 Glass stage plate, frosted. It is supplied along with two stage clips with each transmitted-light stand. In addition a clear glass stage plate (234 460) or an opal stage plate of acrylic plastic (198 275) can be supplied on demand as extras.

#### 234 461 Gliding stage

Specimens on the gliding stage can be quickly moved in any direction and can also be rotated. This stage will accept a frosted glass stage plate, a metal stage plate or a cup stage, which are selected according to the observation technique used.

#### 198 081 Attachable mechanical stage C

This stage is useful for systematically scanning material mounted on 3 x 1" glass slides. It is to be attached to the baseplate of the microscope stand using the stage carrier (191 952).



153 419 Metal stage plate, in incident-light stand



108 122 Frosted glass stage plate, in transmitted-light stand



234 461 Gliding stage



191 952 Stage carrier and 198 081 Mechanical stage C

## Illuminators and Accessories

### For incident illumination

#### Lampholder

The lampholder is secured to the microscope carrier by two screws. It will accept either a mains (line) lamp or a low-voltage lamp. The lamp can be swung sideways or tilted. A second lampholder can be mounted on the microscope carrier, and the two can be adjusted independently.

#### 366 622 Ring illuminator

This incident source gives shadow-free illumination of approximately daylight quality. It is secured to the microscope carrier by means of a special adapter. The distance from the illuminator to the specimen can be adjusted to match the type of specimen. The



M1 Stereomicroscope with two lampholders



Free-standing illuminator

light intensity is sufficient for observations with the 1.0 x and 2.0 x main objectives.

#### Free-standing illuminator

This consists of a heavy cast base with a short column (315 271) on which is mounted a lampholder (366 615). This lampholder also will accept either the mains (line) lamp or the low-voltage lamp.



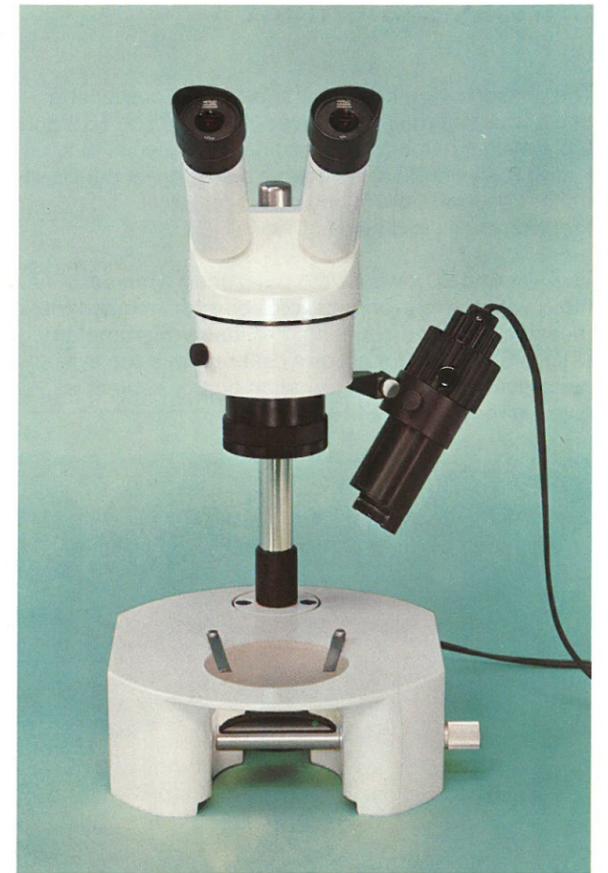
M1 Stereomicroscope with ring illuminator

### For transmitted illumination

The low-voltage lamp or the mains (line) lamp can be fitted directly into the base of any transmitted-light stand. The illumination is centred using the built-in mirror.

right:

M1 Stereomicroscope, equipped for incident and transmitted light



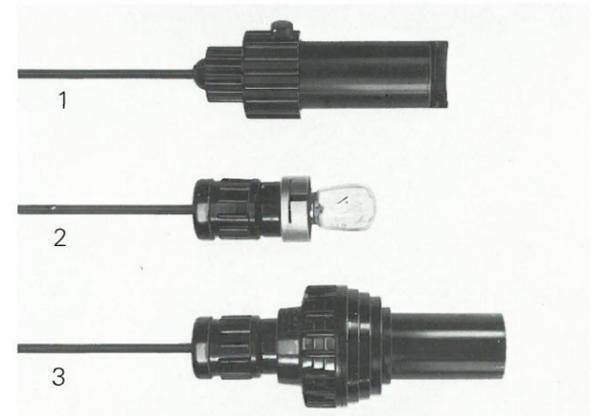
### Light sources

#### Mains (line) lamp 115 V/150 V/220 V, 25 W

This lamp is intended primarily for use at the lower magnifications. It can be supplied with a shade for incident-light work, or without it for transmitted light. It is connected directly to the mains (line) supply and therefore the voltage must be specified when ordering.

#### 194 632 Low-voltage lamp 6 V/15 W

This lamp, which must be fed from a transformer, has a very high intensity and can be used at all magnifications, in both incident and transmitted light, and for photomicrography. The variable filament-collector distance allows the area of the illuminated surface to be matched to the specimen. The filter holder of the lamp will accept two filters of 32 mm diameter. A filter-securing ring (325 625) is available which prevents the filters from falling out if the lamp is tilted steeply.



1 Low-voltage lamp for incident and transmitted light

2 Mains (line) lamp for transmitted light

3 Mains (line) lamp for incident light

## Optical Equipment

The chosen magnification is selected by combining one of the four main objectives (0.25 x, 0.5 x, 1.0 x and 2.0 x) with a pair of the appropriate eyepieces (5 x, 8 x, 10 x, 15 x or 20 x). The table below gives details of the corresponding working distances, total magnifications and fields of view.

The 10 x and 20 x wide-field measuring eyepieces, fitted with the appropriate scale or grid, are used for measurement and counting. The stage micrometer (310 345) is used for precise calibration of the eyepiece scales. Further information on this subject is given in the brochure M 1 510e.

Optical equipment for the Wild M 1 Stereomicroscope



## Technical Data

Working distance, total magnification, field diameter and viewing angle

Objective	Working distance	Eyepiece/field number					Half viewing angle
		5 x/25	8 x/21	10 x/21	15 x/17	20 x/13	
0.25 x	630 mm	1.25 x 100 mm	2 x 84 mm	2.5 x 84 mm	3.75 x 68 mm	5 x 52 mm	1.075°
0.5 x	310 mm	2.5 x 50 mm	4 x 42 mm	5 x 42 mm	7.5 x 34 mm	10 x 26 mm	2.15°
1.0 x	150 mm	5 x 25 mm	8 x 21 mm	10 x 21 mm	15 x 17 mm	20 x 13 mm	4.30°
2.0 x	71 mm	10 x 12.5 mm	16 x 10.5 mm	20 x 10.5 mm	30 x 8.5 mm	40 x 6.5 mm	8.63°

## Catalogue References

- Stock No. 315 469 1 Optics carrier M1 with inclined binocular tube  
 371 390 1 Optics carrier M1 with inclined binocular tube, left eyetube adjustable  
 315 487 1 Microscope carrier for M1

- Stands**  
 366 641 1 Incident-light stand with 220 mm column, metal stage plate and two stage clips  
 366 642 1 Incident-light stand with 300 mm column, metal stage plate and two stage clips  
 366 643 1 Transmitted-light stand with 220 mm column, frosted glass stage plate and two stage clips  
 366 644 1 Transmitted-light stand with 300 mm column, frosted glass stage plate and two stage clips  
 325 683 1 Handrest  
 264 922 1 Swinging-arm stand  
 264 923 1 Table clamp stand

- Stages**  
 177 165 1 Stage clip  
 153 419 1 Metal stage plate, black/white  
 234 460 1 Glass stage plate, clear  
 108 122 1 Glass stage plate, frosted  
 198 275 1 Acrylic plastic stage plate, opal  
 234 461 1 Gliding stage  
 191 952 1 Stage carrier for mechanical stage C  
 198 081 1 Mechanical stage C

- Optics**  
 362 573 1 Objective 0.25 x  
 355 030 1 Objective 0.5 x  
 315 466 1 Objective 1.0 x  
 362 578 1 Objective 2.0 x

- 362 528 1 Wide-field eyepiece 5 x/25  
 191 976 1 Wide-field eyepiece 8 x/21  
 192 620 1 Wide-field eyepiece 10 x/21  
 175 133 1 Wide-field eyepiece 15 x/17  
 202 210 1 Wide-field eyepiece 20 x/13

- Stock No. **Illumination**  
 355 073 1 Lampholder for M1, for mains (line) or low-voltage lamp  
 315 282 1 Lampholder for ring illuminator  
 366 615 1 Lampholder for free-standing illuminator  
 315 280 1 Adapter to fit on 20 mm column and on cast base, to take lampholder  
 315 271 1 Cast base for free-standing illuminator  
 255 518 1 Mains (line) lamp 220 V/25 W for incident or transmitted light  
 255 519 1 Mains (line) lamp 150 V/25 W for incident or transmitted light  
 255 520 1 Mains (line) lamp 115 V/25 W for incident or transmitted light  
 255 531 1 Mains (line) illuminator 220 V/25 W for transmitted light, with spare bulb  
 255 532 1 Mains (line) illuminator 150 V/25 W for transmitted light, with spare bulb  
 255 533 1 Mains (line) illuminator 115 V/25 W for transmitted light, with spare bulb  
 194 632 1 Low-voltage lamp 6 V/15 W for incident or transmitted light  
 325 625 1 Filter-securing ring for filter holder of low-voltage lamp 6 V/15 W  
 366 622 1 Ring illuminator, for M1, with choke 110-250 V  
 166 359 1 Bulb 220 V/25 W  
 166 351 1 Bulb 150 V/25 W  
 166 350 1 Bulb 115 V/25 W  
 166 324 1 Bulb 6 V/15 W  
 354 825 1 Neon tube for ring illuminator for supply unit HH7  
 194 817 1 Regulating transformer 0-8 V/50 VA, prim. 110-250 V, with mains (line) cable  
 127 933 1 Step transformer 2, 4, 6, 8 V/30 VA, prim. 110-250 V, with mains (line) cable

- Miscellaneous**  
 184 506 1 Eyecup  
 334 860 1 Eyecup for spectacle wearers  
 126 273 1 Dust cover for M1  
 362 678 1 Dust cover for swinging-arm and table-clamp stands

## **Our manufacturing programme includes**

Wild M 1 stereomicroscope with interchangeable main objective. Range: 1.25 x to 40 x.

Wild M 3 stereomicroscope with three-step magnification changer. Range: 1.5 x to 160 x.

Wild M 5 stereomicroscope for advanced work. Range: 2 x to 200 x.

Wild M 7A zoom stereomicroscope with 5 : 1 zoom magnification changer. Range: 3 x to 124 x.

Wild M 7S zoom stereomicroscope, convertible for axial photography, with 5 : 1 zoom magnification changer. Range: 3 x to 124 x.

Wild M 8 zoom stereomicroscope with 8 : 1 zoom magnification changer. Range: 2.4 x to 160 x.

Wild M 11 and Wild M 11-EB field, course and laboratory microscopes.

Wild M 20 and Wild M 20-EB research microscopes combine maximum operational convenience with versatility and highest precision. The universal instruments for advanced work and special research techniques.

Wild M 40 inverted biological microscope for tissue culture, plankton and chemical investigations.

Wild M 50 inverted metallurgical microscope for investigations in incident light (bright field, dark field and polarisation).

Wild M 501 sampling microscope, with stopmotor-driven stage, for systematic scanning and for representative gridding in stereological work. With the aid of mathematical procedures, the instrument is used for quantitative determination of the three-dimensional structure of a body from the inspection of sections, and is particularly useful in biology, metallurgy and geology.

Macrotube for M 11, giving an erect, unreversed image at magnifications 3 x, 8 x and 20 x. Ideal for sample preparation and for observing large specimens.

Wild interference attachments for the M 20 microscope. For interferometric measurements and observations in incident light.

Modern microscope lamps: low voltage, halogen and mercury vapour sources.

Transmitted-light illumination bases for Wild microscopes, with one or two lamps for various light sources. Built-in filter sets for fluorescence. Optimum light intensity for microprojection.

Wild objectives of highest quality. For all techniques, including phase contrast, polarisation, incident light and interference.

Wild eyepieces, matched to objective performance. Special eyepieces for measuring, polarisation, photography, wide field, etc.

Wild condensers for all techniques, including bright and dark field, polarisation, fluorescence and phase-contrast.

Electronic micro-length measuring attachments (Wild/Censor for Wild stereomicroscopes and Wild/Tesa for Wild microscopes). Direct readoff for precise and rapid work.

Wild Variomag zoom adapter, range 3 : 1, permits stepless variation of magnification for M 20, M 40 and M 50.

Photomicrographic outfits from 35 mm to 4 x 5" formats. Attachable cameras for all stands, including stereomicroscopes.

Wild Photoautomat—the simplest instrument for fully automatic, electronically-controlled exposure and film transport.

Special equipment for cinemicrography, including time-lapse and TV microscopy.

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M1 101e - XI.75 - Printed in Switzerland